

Figure 1

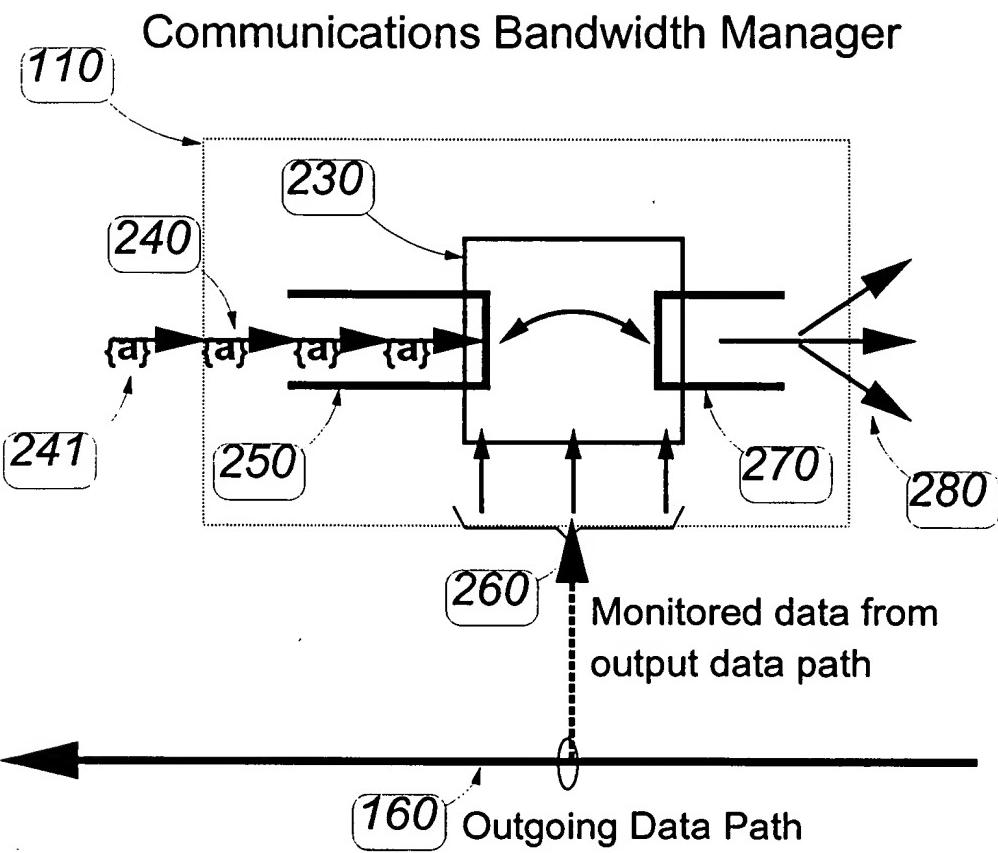


Figure 2

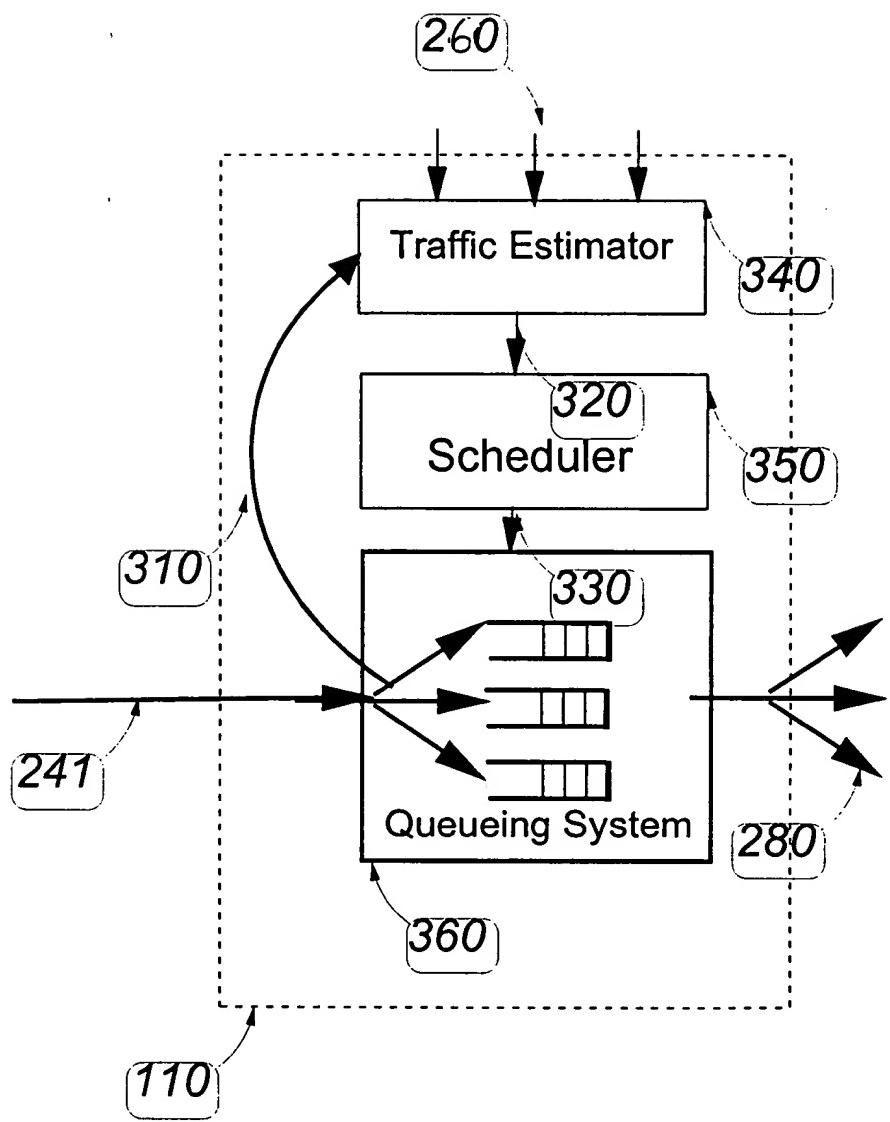


Figure 3

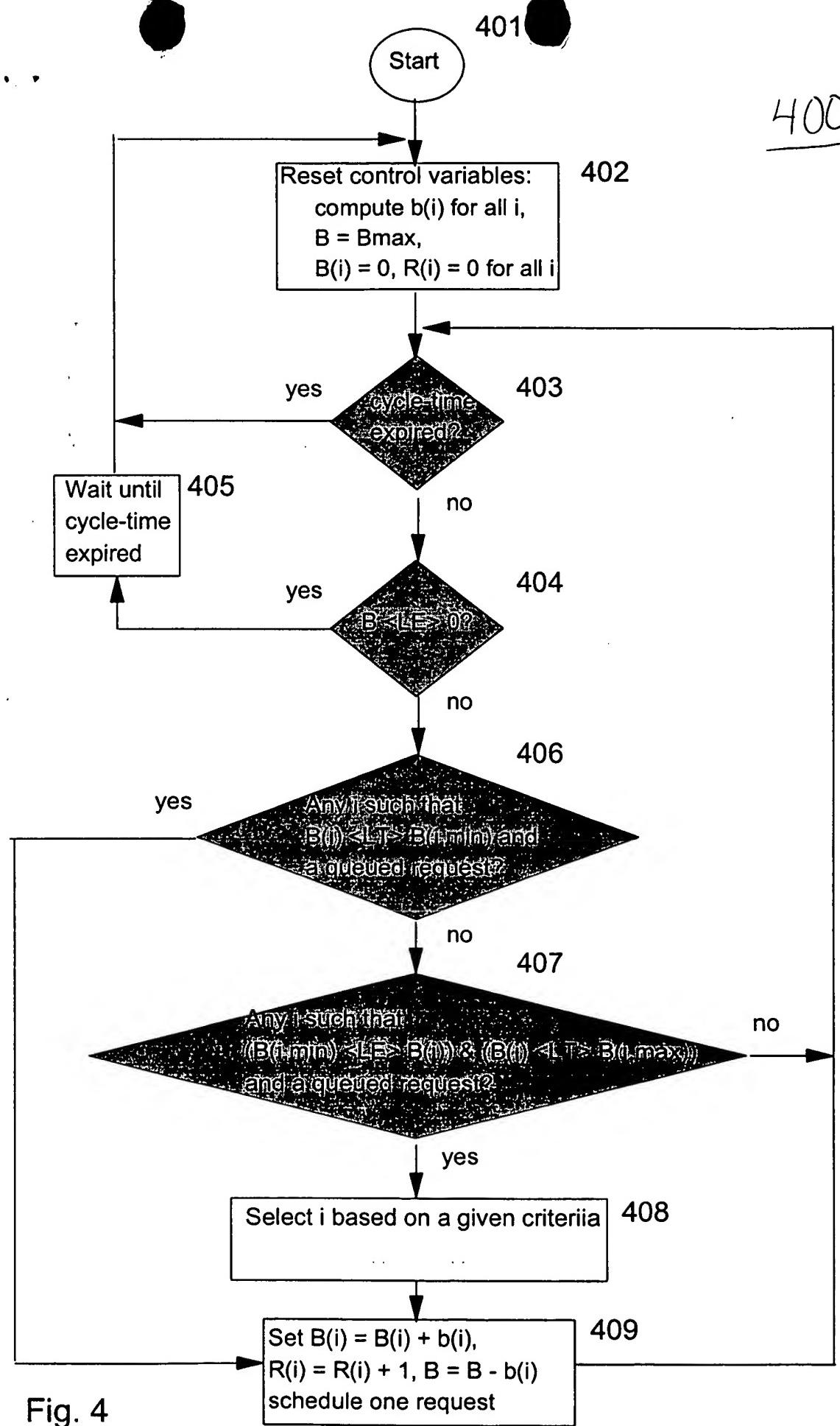


Fig. 4

For all i

$$Ra(i) = (1 - a)Ra(i) + aR(i),$$

$$Ba(i) = (1 - a)Ba(i) + aBm(i),$$

$$b(i) = Ba(i) / Ra(i).$$

where

$Ra(i)$ represents averaged/smoothed number of requests

$Ba(i)$ represents averaged/smoothed bandwidth usage

$Bm(i)$ represents the measured/monitored bandwidth usage

all in a service cycle time, and

$b(i)$ represents the expected bandwidth usage by a one request

Fig. 4B